

Appl. No. 09/662,409
Amd. Dated December 23, 2003
Reply to Office Action of November 13, 2003

Amendment to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (cancelled)

2. (cancelled)

3. (cancelled)

4. (cancelled)

5. (currently amended)

A microfluidic device, comprising:

a body structure having at least a first microscale channel disposed therein;

a capillary element having first and second ends and a capillary channel disposed

therethrough, the first end of the capillary element being attached to the body structure whereby the capillary channel is in fluid communication with the at least first microscale channel; and

a conductive layer deposited on at least a portion of a surface of the capillary element, the conductive layer extending from a point proximal to the first end of the capillary element up to the second end of the capillary element. The microfluidic device of claim 2, wherein the capillary element is attached to the body structure by the first end being inserted into an aperture in the body structure.

6. (previously presented)

The microfluidic device of claim 5, wherein

the conductive layer is deposited along a portion of a length of the capillary element that extends to a point proximal to but not up to the first end of the capillary element.

7. (currently amended)

A microfluidic device, comprising:

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a body structure having at least a first microscale channel disposed therein;
a capillary element having first and second ends and a capillary channel disposed
therethrough, the first end of the capillary element being attached to the body structure whereby
the capillary channel is in fluid communication with the at least first microscale channel; and
a conductive layer deposited on at least a portion of a surface of the capillary
element, the conductive layer extending from a point proximal to the first end of the capillary
element up to the second end of the capillary element. The microfluidic device of claim 2, wherein
the capillary element is substantially rectangular.

8. (cancelled)

9. (cancelled)